**Serindipity Canners**

On Monday, September 12, 1995, Mr. Mitchell Gordon, vice president of operations, asked the controller, the sales manager, and the production manager to meet with him to discuss the amount of tomato products to pack that season. The tomato crop, which had been purchased at planting, was beginning to arrive at the cannery, and packing operations would have to be started by the following Monday. Serendipity Canners was a medium-sized company which canned and distributed a variety of fruit and vegetable products under private brands in the western states.

Mr. William Cooper, the controller, and Mr. Charles Myers, the sales manager, were the first to arrive in Mr. Gordon's office. Dan Tucker, the production manager, came in a few minutes later and said that he had picked up Produce Inspection's latest estimate of the quality of the incoming tomatoes. According to their report, about 20 percent of the crop was grade "A" quality and the remaining portion of the 3,000,000-pound crop was grade "B."

Gordon asked Myers about the demand for tomato products for the coming year. Myers replied that for all practical purposes they could sell all the whole canned tomatoes they could produce. The expected demand for tomato juice and tomato paste, on the other hand, was limited. The sales manager then passed around the latest demand forecast, which is shown in Exhibit 1. He reminded the group that the selling prices had been set in light of the long-term marketing strategy of the company, and potential sales had been forecasted at these prices.

EXHIBIT 1 Demand Forecasts

SELLING PRICE DEMAND FORECAST

PRODUCT PER CASE (CASES)

24-2 1/2 Whole Tomatoes $4.00 800,000

24-2 1/2 Choice Peach Halves $5.40 10,000

24-2 1/2 Peach Nectar $4.60 5,000

24-2 1/2 Tomato Juice $4.50 50,000

24-2 1/2 Cooking Apples $4.90 15,000

24-2 1/2 Tomato Paste $3.80 80,000

Bill Cooper, after looking at Myer's estimates of demand, said that it looked like the company "should use the entire crop for whole tomatoes and should do quite well (on the tomato crop) this year." With the new accounting system that had been set up, he had been able to compute the contribution for each product, and according to his analysis the incremental profit on the whole tomatoes was greater than for any other tomato product. In May, after Serendipity has signed contracts agreeing to purchase the grower's production at an average delivered price of 6 cents per pound, Cooper had computed the tomato products' contributions (see Exhibit 2).

Dan Tucker brought to Cooper's attention that, although there was ample production capacity, it was impossible to produce all whole tomatoes as too small a portion of the tomato crop was "A" quality. Serendipity used a numerical scale to record the quality of both raw produce and prepared products. This scale ran from zero to ten, the higher number representing better quality. Rating tomatoes according to this scale, "A" tomatoes averaged nine points per pound and "B" tomatoes averaged five points per pound. Tucker noted that the minimum average input quality for canned whole tomatoes was eight, and for juice it was six points per pound. Paste could be made entirely from "B" grade tomatoes. This means that whole tomato production was limited to 800,000 pounds.

Gordon stated that this was not a real limitation. He had been recently solicited to purchase any amount up to 80,000 pounds of grade "A" tomatoes at 8 1/2 cents per pound and at that time had turned down the offer. He felt, however, that the tomatoes were still available.

EXHIBIT 2 Product Item Profitability

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PRODUCT

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24-2 1/2 24-2 1/2 24-2 1/2 24-2 12 24-2 1/2 24-2 1/2

Whole Peach Peach Tomato Cooking Tomato

COSTS Tomatoes Halves Nectar Juice Apples Paste

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Selling Price (per case) $4.00 $5.40 $4.60 $4.50 $4.90 $3.80

Variable Costs

Direct Labor 1.18 1.40 1.27 1.32 0.70 0.54

Variable Overhead 0.24 0.32 0.23 0.36 0.22 0.26

Variable Selling 0.40 0.30 0.40 0.85 0.28 0.38

Packaging Material 0.70 0.56 0.60 0.65 0.70 0.77

Fruit\* (cost per case) 1.08 1.80 1.70 1.20 0.90 1.50

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Total Variable Costs 3.60 4.38 4.20 4.38 2.80 3.45

Net Profit (per case) 0.40 1.02 0.40 0.12 2.10 0.35

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\*Product usage is as given below.

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POUNDS

PRODUCT PER CASE

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Whole Tomatoes 18

Peach Halves 18

Peach Nectar 17

Tomato Juice 20

Cooking Apples 27

Tomato Paste 25

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EXHIBIT 3 Marginal Analysis of Tomato Products

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Z= cost per pound of "A" tomatoes in cents

Y= cost per pound of "B" tomatoes in cents

(1) (600,000 lb x Z) - (2,400,000 lb x y) = (3,000,000 lb x 6)

Z Y

(2) \_ = \_

9 5

Z= 9.32 cents per pound

Y= 5.18 cents per pound

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CANNED TOMATO TOMATO

PRODUCT WHOLE TOMATOES JUICE PASTE

Selling Price $4.00 $4.50 $3.80

Variable Cost 2.52 3.18 1.95

(excluding Tomato Costs) \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

$1.48 $1.32 $1.85

Tomato Cost 1.49 1.24 1.30

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Marginal Profit ($0.01) $0.08 $0.55

Myers, who had been doing some calculations, said that although he agreed that the company "should do quite well this year," it would not be by canning whole tomatoes. It seemed to him that the tomato cost should be allocated on the basis of quality and quantity rather than by quantity only, as Cooper had done. Therefore, he had recomputed the marginal profit on this basis (see Exhibit 3), and from his results, Serendipity should use 2 million pounds of the "B" tomatoes for paste, and the remaining 400,000 pounds of "B" tomatoes and all of the "A" tomatoes for juice. If the demand expectations were realized, a contribution of $48,000 would be made on this year's tomato crop.